



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-1313; Directorate Identifier 2012-NM-080-AD]

RIN 2120-AA64

Airworthiness Directives; Gulfstream Aerospace Corporation

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for all Gulfstream Aerospace Corporation Model GV and GV-SP airplanes. This proposed AD was prompted by reports of two failures of the fuel boost pump and over-heat damage found on the internal components and external housing. This proposed AD would require doing an inspection to determine if fuel boost pumps having a certain part number are installed, replacing the fuel boost pumps having a certain part number, and revising the airplane maintenance program to include revised instructions for continued airworthiness. We are proposing this AD to prevent fuel leakage into the dry cavity of the boost pump and outside of the fuel pump, and to prevent capacitor clearance issues in the dry cavity, which together could result in an uncontrolled fire in the wheel well.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For Gulfstream, Triumph Aerostructures, and GE Aviation service information identified in this proposed AD, contact Gulfstream Aerospace Corporation, Technical Publications Dept., P.O. Box 2206, Savannah, GA 31402-2206; telephone 800-810-4853; fax 912-965-3520; email pubs@gulfstream.com; Internet http://www.gulfstream.com/product_support/technical_pubs/pubs/index.htm. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Darby Mirocha, Aerospace Engineer, Propulsion and Services Branch, ACE-118A, FAA, Atlanta Aircraft Certification Office, 1701 Columbia Avenue, College Park, GA 30337; telephone (404) 474-5573; fax (404) 474-5606; email: darby.mirocha@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2012-1313; Directorate Identifier 2012-NM-080-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

We have received a report of failure of the fuel boost pump and over-heat damage found on the internal components and external housing. A subsequent investigation identified inadequate clearance between the internal capacitor and a printed circuit board as the root cause of the failure. Additionally, on other components, a damaged o-ring between the “wet” and “dry” cavities of the boost pump resulted in fuel ingress into the “dry” cavity. Product improvements have been incorporated into the boost pumps to modify the capacitor installation to prevent external shorting and incorporate an inspection port to allow for inspection of the “dry” cavity. This condition, if not corrected, could cause fuel leakage into the dry cavity of the boost pump and outside of the fuel pump, and capacitor clearance issues in the dry cavity, which together could result in an uncontrolled fire in the wheel well.

Relevant Service Information

We reviewed Gulfstream V Service Bulletin 197 (for Model GV airplanes), and Gulfstream G550 Service Bulletin 122 (for Model GV-SP airplanes), both dated April 11, 2012, both including the following service information:

- Triumph Service Bulletin SB-TAGV/GVSP-28-JG0162, dated August 30, 2011.
- GE Service Bulletin 31760-28-100, dated February 15, 2011.

This service information describes procedures for doing an inspection to determine if fuel boost pumps having a certain part number are installed, and replacing the fuel boost pumps having a certain part number.

We have also reviewed Gulfstream Document GV-GER-0003, Instructions for Continued Airworthiness, Fuel Boost Pump with Leak Check Port, dated November 24, 2010. This service information describes procedures for fuel leak checks of the fuel boost pump.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of these same type designs.

Proposed AD Requirements

This proposed AD would require accomplishing the actions specified in the service information described previously, except as discussed under "Differences Between the Proposed AD and the Service Information."

Differences Between the Proposed AD and the Service Information

Gulfstream V Service Bulletin 197 (for Model GV airplanes) and Gulfstream G550 Service Bulletin 122 (for Model GV-SP airplanes), both dated April 11, 2012, specify a compliance time of 42 months after the release of those service bulletins for accomplishing the actions in those service bulletins. This proposed AD requires a

compliance time of 36 months after the effective date of this proposed AD. In developing the compliance time, we considered not only the degree of urgency associated with addressing the subject unsafe condition, but the manufacturer's recommendation for an appropriate compliance time, the availability of required parts, and the practical aspect of doing the actions within an interval of time that corresponds to the typical scheduled maintenance for the majority of affected operators. This difference has been coordinated with Gulfstream.

Costs of Compliance

We estimate that this proposed AD affects 357 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection to determine if a certain part number is installed	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$30,345
Maintenance program revision	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$30,345

We estimate the following costs to do any necessary replacements that would be required based on the results of the proposed inspection. We have no way of determining the number of aircraft that might need these replacements:

On-condition costs

Action	Labor cost	Parts cost	Cost per product
Replacement	24 work-hours X \$85 per hour = \$2,040	\$7,600	\$9,640

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency’s authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: “General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

(1) Is not a “significant regulatory action” under Executive Order 12866,

(2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),

(3) Will not affect intrastate aviation in Alaska, and

(4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

Gulfstream Aerospace Corporation: Docket No. FAA-2012-1313; Directorate Identifier 2012-NM-080-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to all Gulfstream Aerospace Corporation Model GV and GV-SP airplanes, certificated in any category.

(d) Subject

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 2822, Fuel boost pump.

(e) Unsafe Condition

This AD was prompted reports of two failures of the fuel boost pump and over-heat damage found on the internal components and external housing. We are issuing this AD to prevent fuel leakage into the dry cavity of the boost pump and outside of the fuel pump, and to prevent capacitor clearance issues in the dry cavity, which together could result in an uncontrolled fire in the wheel well.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Inspection to Determine the Part Number (P/N)

Within 36 months after the effective date of this AD, inspect the fuel boost pumps to determine whether P/N 1159SCP500-5 is installed, in accordance with the Accomplishment Instructions of Gulfstream V Service Bulletin 197, dated April 11, 2012 (for Model GV airplanes); or Gulfstream G550 Service Bulletin 122, dated April 11, 2012 (for Model GV-SP airplanes); including the service information specified in paragraphs (g)(1) and (g)(2) of this AD. A review of airplane maintenance records is acceptable in lieu of this inspection if the part number of the fuel boost pumps can be conclusively determined from that review.

(1) Triumph Service Bulletin SB-TAGV/GVSP-28-JG0162, dated August 30, 2011.

(2) GE Service Bulletin 31760-28-100, dated February 15, 2011.

(h) Replacement

If the inspection required by paragraph (g) of this AD reveals a fuel boost pump with P/N 1159SCP500-5: Before further flight, replace the fuel boost pump with a serviceable pump having P/N 1159SCP500-7, in accordance with Gulfstream V Service Bulletin 197, dated April 11, 2012 (for Model GV airplanes); or Gulfstream G550 Service Bulletin 122, dated April 11, 2012 (for Model GV-SP airplanes); including the service information specified in paragraphs (h)(1) and (h)(2) of this AD.

(1) Triumph Service Bulletin SB-TAGV/GVSP-28-JG0162, dated August 30, 2011.

(2) GE Service Bulletin 31760-28-100, dated February 15, 2011.

(i) Maintenance Program Revision

Within 500 flight hours after the effective date of this AD, revise the airplane maintenance program to include Gulfstream Document GV-GER-0003, Instructions for Continued Airworthiness, Fuel Boost Pump with Leak Check Port, dated November 24, 2010.

(1) For airplanes on which fuel boost pump P/N 1159SCP500-5 has been replaced in accordance with paragraph (h) of this AD: The initial compliance time for the inspection is within 500 flight hours after doing the replacement specified in paragraph (h) of this AD.

(2) For airplanes on which the inspection required by paragraph (g) of this AD reveals that a fuel boost pump with P/N 1159SCP500-7 has been installed: After revising the airplane maintenance program, as required by paragraph (i) of this AD, the initial inspection is required before further flight after doing the inspection required by paragraph (g) of this AD.

(j) No Alternative Actions or Intervals

After accomplishing the revision required by paragraph (i) of this AD, no alternative actions (e.g., inspections) or intervals may be used unless the actions or intervals are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (l) of this AD.

(k) Parts Installation Prohibition

As of the effective date of this AD, no person may install a fuel boost pump having P/N 1159SCP500-5 on any airplane.

(l) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Atlanta Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(m) Related Information

(1) For more information about this AD, contact Darby Mirocha, Aerospace Engineer, Propulsion and Services Branch, ACE-118A, FAA, Atlanta ACO, 1701 Columbia Avenue, College Park, GA 30337; telephone (404) 474-5573; fax (404) 474-5606; email: darby.mirocha@faa.gov.

(2) For Gulfstream, Triumph Aerostructures, and GE Aviation service information identified in this AD, contact Gulfstream Aerospace Corporation, Technical Publications Dept., P.O. Box 2206, Savannah, GA 31402-2206; telephone 800-810-4853; fax 912-965-3520; email pubs@gulfstream.com; Internet http://www.gulfstream.com/product_support/technical_pubs/pubs/index.htm. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on December 17, 2012.

Kalene C. Yanamura,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

[FR Doc. 2012-31036 Filed 12/21/2012 at 4:15 pm; Publication Date: 12/26/2012]